

**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES
MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS**

1-3. (Canceled)

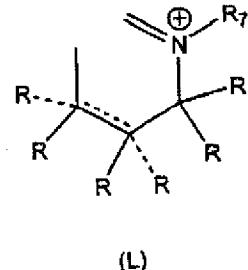
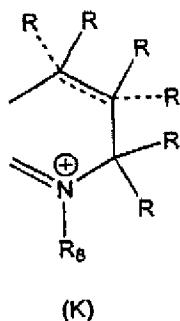
4. (Currently amended) The carboxamide-substituted dye as claimed in claim 4, 34 in which Cyc1 is substituted or unsubstituted phenyl, naphthyl, pyridyl or cyclohexyl.

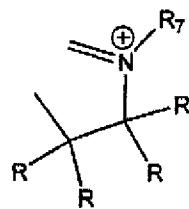
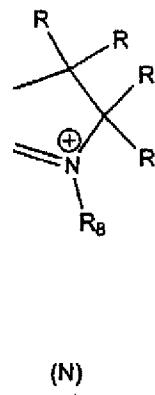
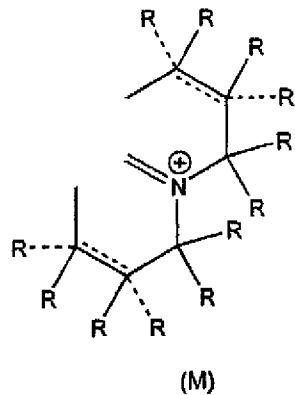
5. (Cancelled)

6. (Currently amended) The carboxamide-substituted dye as claimed in claim 5 34, in which R₁ is bridged with R₈ or R₃ is bridged with R₇ or R₁ is bridged with R₈ and R₃ is bridged with R₇ forming a ring system

7. (Previously presented) The carboxamide-substituted dye as claimed in claim 6, in which the ring system comprises 5- or 6-membered rings.

8. (Currently amended) The carboxamide-substituted dye as claimed in claim 7, in which a ring system of the structure (K), (L), (M), (N) or (O) is formed:





in which R are independently defined as R_1 , R_3 , R_4 and R_7 , R_8 are as defined in claim 1,

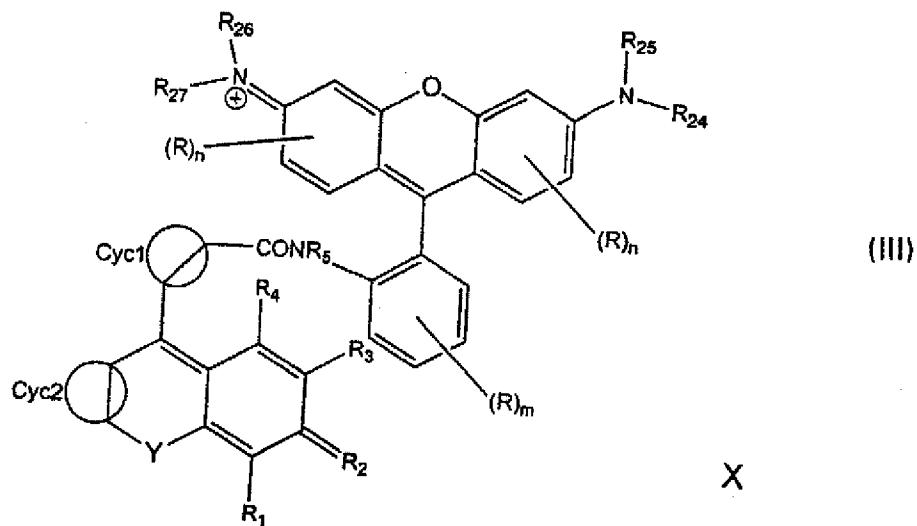
and the dashed lines are optionally double bonds in the presence of which the moieties bound via a dashed line are absent.

9-12. (Cancelled)

13. (Withdrawn) The carboxamide-substituted dye as claimed in claim 1, in which Y = sulfur, selenium or CR_aR_b , R_a and R_b being as defined in claim 1.
14. (Withdrawn) The carboxamide-substituted dye as claimed in claim 1, in which Y = r moieties $-R_{14}$ and $-R_{15}$, R_{14} and R_{15} being as defined in claim 1.
15. (Currently amended) The carboxamide-substituted dye as claimed in claim

8 , in which Cyc1 is optionally substituted phenyl, Cyc2 has the structure (E) and Y = oxygen and R₇ and R₃ form a ring system (K) ~~[,]R₇ and R₃ being as defined in claim 1 .~~

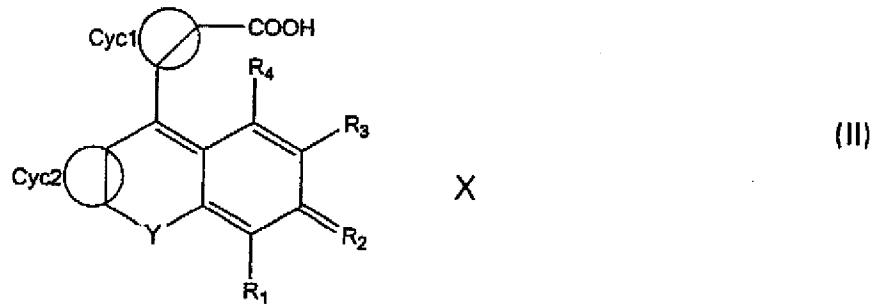
16. (Withdrawn) The carboxamide-substituted dye as claimed in claim 8, in which Cyc1 is optionally substituted phenyl, Cyc2 has the structure (A) and Y = sulfur, selenium or CR_aR_b, R_a and R_b being as defined in claim 1.
17. (Withdrawn) A multichromophore system in which a carboxamide-substituted dye as claimed in claim 1 is coupled via R₅ or/and R₆ to one or more further dye molecules, R₅ and R₆ being as defined in claim 1.
18. (Withdrawn) The multichromophore system as claimed in claim 17, in which the one or more further dye molecules are carboxamide-substituted dyes as claimed in any of claims 1 to 16.
19. (Withdrawn) The multichromophore system as claimed in claim 18, in which coupling takes place on R₅ or/and R₆ of the further carboxamide-substituted dyes, R₅ and R₆ being as defined in claim 1.
20. (Withdrawn) The multichromophore system as claimed in claim 17 of the formula (III)



where the moieties are as defined in claim 1, R in each case independently is defined as R₁, R₃, R₄ and R₂₄, R₂₅ and R₂₆, R₂₇ are defined as R₇, R₈ in claim 1, with n independently being 0, 1, 2 or 3 and m being 0, 1, 2, 3 or 4.

21. (Currently amended) A process for preparing carboxamide-substituted dyes of the formula (I) as claimed in claim 4 34, comprising the following steps:

(a) converting the carboxyl group of a dye of the formula (II)



in which the moieties are defined as indicated in claim 1, into an activated form;

(b) reacting the activated dye obtained in step (a) with a secondary amine HNR₅R₆; and
(c) optionally isolating the carboxamide-substituted dye of the formula (I) obtained in step (b).

22. (Original) The process as claimed in claim 21, in which step (a) is carried out at temperatures of from room temperature to 60°C.

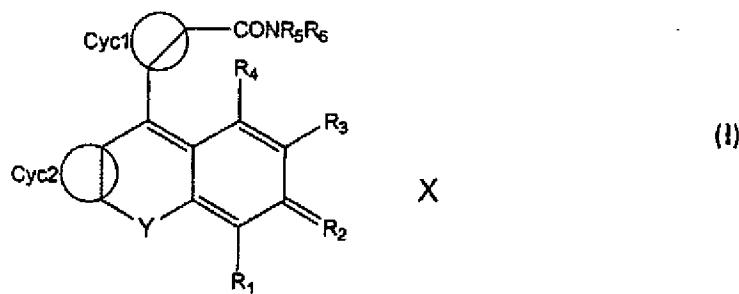
23. (Previously presented) The process as claimed in claim 21, in which an aprotic solvent is used in step (b).

24. (Previously presented) The process as claimed in claim 21 in which N-hydroxysuccinimide, N-hydroxyphthalimide, N-hydroxynaphthalimide,

O-(N-succinimidyl)-N,N,N',N'-tetramethyluronim tetrafluoroborate (TSTU)
are used for activation.

25. (Cancelled);
26. (Withdrawn) The method as claimed in claim 33, in which the carboxamide-substituted dye of the formula (I) is coupled to at least one of the analyte to be detected and to a component of at least one of a detection reagent and to a support.
27. (Withdrawn) The method as claimed in claim 26, in which detection comprises at least one of an immunological detection and detection by way of nucleic acid hybridization.
28. (Withdrawn) A conjugate of a carboxamide-substituted dye of the formula (I) as claimed in claim 1 wherein the carboxamide-substituted dye is coupled to a binding partner.
29. (Withdrawn) The conjugate as claimed in claim 28, in which the binding partner is selected from the group consisting of peptides, polypeptides, nucleic acids, nucleosides, nucleotides, nucleic acid analogs and haptens.
30. (Withdrawn) The method as claimed in claim 26 in which the carboxamide-substituted dye is coupled to a binding partner and detection is carried out by nucleic acid hybridization processes and immunochemical processes.
31. (Withdrawn) The method as claimed in claim 26, in which coupling takes place via the substituents R₅ or/and R₆ of the carboxamide-substituted dye of the formula (I), the moieties R₅ and R₆ being as defined in claim 1.
32. (Withdrawn) The use as claimed in claim 31, in which coupling is carried out via a covalent bond.

33. (Withdrawn) A method of detecting an analyte using carboxamide-substituted dye comprising the steps of providing one or more compounds of the general formula (I)



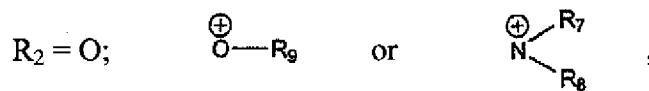
for determining at least one of the qualitative and quantitative presence of the analyte with a detection agent;

wherein

Y = oxygen, sulfur, selenium, CR_aR_b, NR_c, a direct linkage or is -R₁₄ and -R₁₅;

R₁, R₃, R₄ are independently hydrogen, halogen, -O[⊖], a hydroxyl group, thiol group, amino group, ammonium group, sulfo group, phospho group, nitro group, carbonyl group, carboxyl group, a carboxylic acid derivative, a nitrile group, isonitrile group, cyanate group, isocyanate group, thiocyanate group, isothiocyanate group or a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon atoms;

R_a, R_b, R_c and R₁₄, R₁₅ independently are as defined for R₁, R₃, R₄;

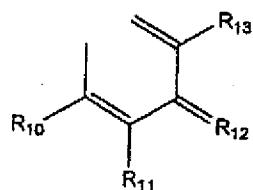


in which

R₇, R₈, R₉ independently are hydrogen or a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon

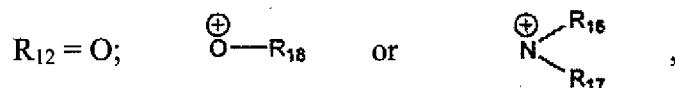
atoms; or

R_1 together with R_2 is



in which

R_{10} , R_{11} , R_{13} are as defined for R_1 , R_3 , R_4 ;



in which

R_{16} , R_{17} , R_{18} are as defined for R_7 , R_8 , R_9 ;

R_5 , R_6 , independently are a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon atoms;

Cyc1 is an organic moiety which comprises a ring system selected from aromatic, heteroaromatic, quinoidal and cycloaliphatic rings;

Cyc2 is an organic moiety which comprises a ring system selected from aromatic, heteroaromatic, quinoidal and cycloaliphatic rings;

each of said moieties in the dye of the formula (I) being able to form a ring system with one or more neighboring moieties;

and X being one or more mono- or multivalent anions, when required for balancing the charge;

with the proviso that

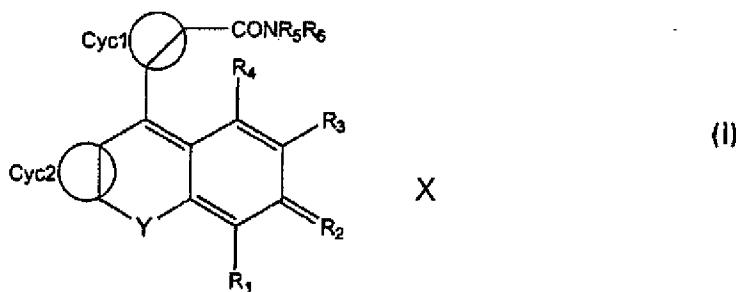
- Y = oxygen,
- Cyc1 = phenyl or substituted phenyl,
- Cyc2 = hydroxyl-, ether- or ester-substituted phenyl

and

- $R_2 = O$

do not appear in the formula (I) at the same time.

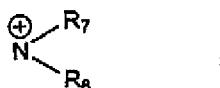
34. (New) A carboxamide-substituted dye of the formula (I)



in which

$Y =$ oxygen, R_1 , R_3 , R_4 are independently hydrogen, halogen, $-O^\ominus$, a hydroxyl group, thiol group, amino group, ammonium group, sulfo group, phospho group, nitro group, carbonyl group, carboxyl group, a carboxylic acid derivative, a nitrile group, isonitrile group, cyanate group, isocyanate group, thiocyanate group, isothiocyanate group or a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon atoms;

$R_2 =$

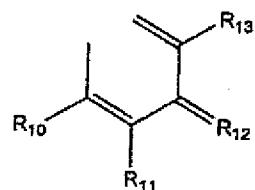


,

in which

R_7 , R_8 , independently are hydrogen or a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon atoms; or

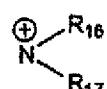
R_1 together with R_2 is



in which

R₁₀, R₁₁, R₁₃ are as defined for R₁, R₃, R₄;

R₁₂ =



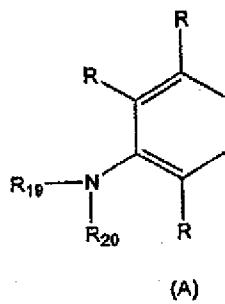
in which

R₁₆, R₁₇, are as defined for R₇, R₈,

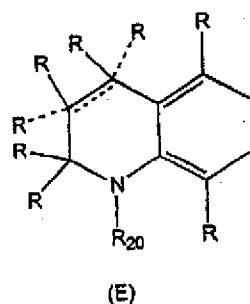
R₅, R₆, independently are a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon atoms, wherein at least one of R₅ and R₆ comprises a carboxy group;

Cyc1 is an organic moiety which comprises a ring system selected from aromatic, heteroaromatic, quinoidal and cycloaliphatic rings;

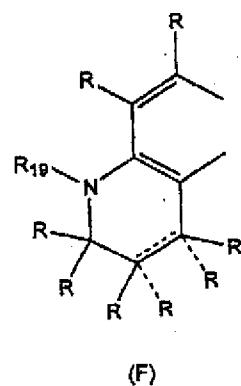
Cyc2 is an organic moiety which comprises a ring system selected from aromatic, heteroaromatic, quinoidal and cycloaliphatic rings; wherein Cyc2 has a structure selected from (A), (E), (F), (H) or (J),



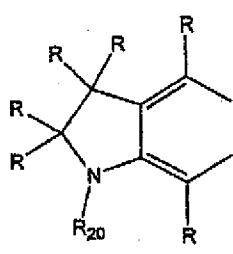
(A)



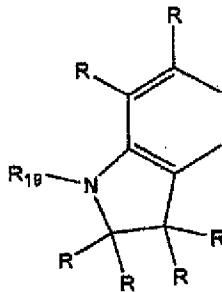
(E)



(F)



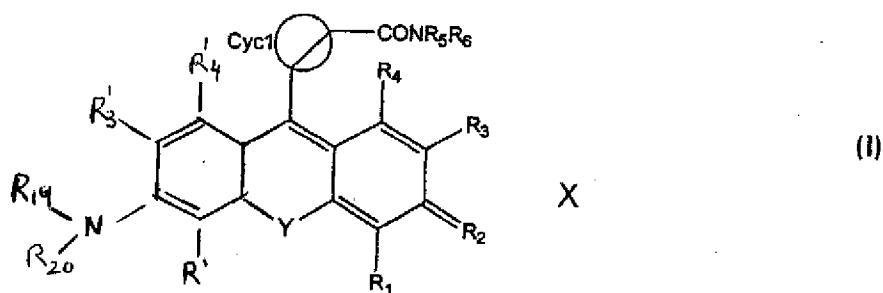
(H)



(J)

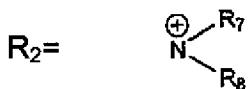
in which R in each case independently is defined as R₁, R₃, R₄; R₁₉, R₂₀ and the dashed lines are optionally double bonds in the presence of which the moieties bound via a dashed line are absent, each of said moieties in the dye of the formula (I) being able to form a ring system with one or more neighboring moieties; and X being one or more mono- or multivalent anions, when required for balancing the charge; and wherein at least one of R₁, R₃, R₄, R₁₀, R₁₁, R₁₃ and R is a sulfo group

35. (New) A carboxamide-substituted dye of the formula (I)



in which

Y = oxygen, R₁ R_{1'} R₃ R_{3'} R₄ and R_{4'} are independently hydrogen, halogen, -O[⊖], a hydroxyl group, thiol group, amino group, ammonium group, sulfo group, phospho group, nitro group, carbonyl group, carboxyl group, a carboxylic acid derivative, a nitrile group, isonitrile group, cyanate group, isocyanate group, thiocyanate group, isothiocyanate group or a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon atoms; wherein at least one of R₁, R_{1'} R₃ R_{3'} R₄ and R_{4'} is a sulfo group



R_5 , R_6 , independently are a straight-chain, branched or cyclic saturated or unsaturated hydrocarbon group having up to 40 carbon atoms; wherein at least one of R_5 and R_6 comprises a carboxyl group

R_7 , R_8 , R_{19} R_{20} independently are hydrogen or a straight-chain, branched or cyclic saturated or unsaturated hydro carbon group having up to 40 carbon atoms,

Cyc1 is an organic moiety which comprises a ring system selected from aromatic, heteroaromatic, quinoidal and cycloaliphatic rings.

36. (New) The carboxamide-substituted dye of the formula (I) of claim 34, wherein R_7 R_8 independently are straight-chained saturated hydrocarbon groups.
37. (New) The carboxamide-substituted dye of the formula (I) of claim 35, wherein R_1 R_1' independently are sulfo groups.